I CLAIM:

1. A vapor deposition effusion source, comprising:

a substantially closed vessel adapted to contain a heated quantity of source material, the vessel including at least one vapor delivery nozzle adapted to expel a plume of source material;

a heating system adapted to maintain the nozzle at a temperature higher than the source material.

2. The source of claim 1 further comprising a thermal control shield disposed around at least partially around the vessel.

3. The source of claim 2, wherein the thermal control shield includes an outer shell and plural insulation layers.

4. The source of claim 3, wherein the outer shell is formed of one or more materials chosen from the following group: graphite, boron nitride, tantalum, molybdenum, tungsten, rhenium and titanium.

5. The source of claim 4, wherein the outer shell is ceramic coated.

6. The source of claim 1, wherein the vessel includes plural spaced-apart vapor delivery nozzles.

7. The source of claim 6, wherein the nozzles are disposed along an elongate axis configured to expel overlapping plumes of source material, whereby a fog of source material of substantially uniform flux along the elongate axis is created.

8. The source of claim 6, wherein the vessel is constructed of materials chosen from the group consisting of graphite, pyrolitic boron nitride coated graphite, tantalum, molybdenum, tungsten and ceramics.

9. The source of claim 1, wherein the vessel includes a crucible and a lid, wherein the at least one vapor delivery nozzle is positioned in the lid.

10. The source of claim 9, wherein the at least one nozzle is integrally formed into the lid.

11. The source of claim 9, wherein there are plural nozzles positioned on the lid.

12. The source of claim 11, wherein the nozzles are spaced apart between 1 and 20 centimeters.

13. The source of claim 9, wherein the heating system includes an electrical heating element disposed in the lid.

14. The source of claim 13, wherein the heating element disposed in the lid is generally U-shaped.

15. The source of claim 9, wherein the heating system is adapted to maintain the lid at a temperature higher than the source material.

16. The source of claim 1, wherein the at least one nozzle has a discharge opening between 0.25 and 2.5 centimeters in diameter.

17. The source of claim 1, wherein the heating system includes at least one U-shaped heating element.

18. A vapor deposition source, comprising:

a crucible configured to hold a quantity of molten constituent material; and

at least one nozzle to pass vapor evaporated from the molten constituent material out of the crucible.

19. The source of claim 18 further comprising a heating system adapted to maintain the nozzle at a temperature above the temperature of the constituent material.

20. The source of claim 19, wherein the heating system is configured to maintain the lid at a temperature above the temperature of the constituent material.

21. The source of claim 18, wherein in the nozzle is sized to constitute the rate limiting factor in effusion of the vapor.

22. The source of claim 18, wherein the nozzle has an opening area between 0.05 and 5 square centimeters.

23. The source of claim 18, a thermal control shield at least partially surrounding the crucible.

24. The source of claim 18, wherein the thermal control shield includes an outer shell and thermal insulation.

25. The source of claim 18, wherein the crucible is constructed from materials chosen from the following group: graphite, pyrolitic boron nitride coated graphite, tantalum, molybdenum, tungsten and ceramics.

26. A vapor deposition source, comprising:

a substantially closed vessel adapted to contain a heated quantity of source material, the vessel including an effusion side with at least one vapor delivery nozzle adapted to expel a plume of source material; and

a thermal control shield configured to substantially cover the effusion side of the vessel, except for an area adjacent the at least one nozzle, to block thermal radiation from the vessel from reaching a substrate onto which the constituent material is to be deposited.

27. The source of claim 26, wherein the thermal control shield substantially encloses the vessel.

28. The source of claim 26, wherein the thermal control shield includes an outer shell and a thermal insulation layer.

29. The source of claim 26 further comprising a heating system adapted to maintain the at least one nozzle at a temperature higher than the temperature of the constituent material.